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**A long-term record of upwelling from the
Santa Barbara Basin, southern California.**

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Abstract

A record of radiocarbon ages of surface ocean water in the Santa Barbara Basin, southern California, has been derived from AMS ^{14}C measurements on samples of the pelagic pteropod Limacina Helicina, preserved in varved sediments. Ocean reservoir ages, derived from these data and the atmospheric (tree ring) ^{14}C record, vary from 600 to over 1000 years, and show clear trends over time. The record suggests that increased rates of upward mixing of radiocarbon-depleted subsurface water began around AD1410 and again around AD1660, and that these excursions are superimposed on a long-term trend towards decreased upwelling.

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